DOCUMENT RESUME

ED 286 562 JC 870 433

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TITLE Comparison of Grade Distributions for Telecourses and Print Based Courses.
INSTITUTION John Tyler Community Coll., Chester, VA. Extended Learning Inst.
PUB DATE Apr 87
NOTE 10p.
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; Academic Failure; *Academic Persistence; Community Colleges; Comparative Analysis; Dropouts; *Grades (Scholastic); *Independent Study; Outreach Programs; *Telecourses; Two Year Colleges; Two Year College Students

ABSTRACT

John Tyler Community College (JTCC) in Virginia founded the Extended Learning Institute (ELI) in 1982 as a program to develop and administer instruction via alternative delivery systems. Print-based, independent study courses have been the primary alternative system used, though telecourses were offered from fall 1983 through winter 1985 and again in spring 1987. A study was conducted to compare grade distributions for ELI telecourses and print-based courses as a means of assessing the relative effectiveness of the delivery systems. The final course grades of 321 telecourse students and 1,460 independent study students were examined, revealing that, in general: (1) telecourse students received better final grades than independent study students; (2) 40.1% of the telecourse students withdrew or failed, compared to 61.3% of the independent study group; (3) the grade distribution for print-based courses approximated a bimodal distribution with 29.5% clustered around the high end of the distribution, 61.3% either failing or withdrawing, and only 8.8% receiving a C or D grade; and (4) the grade distribution for telecourse students showed a more even distribution; i.e., the numbers of A and F grades were exactly the same, while the percentages of B and C grades were not significantly different. (EJV)

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ED286562

COMPARISON OF GRADE DISTRIBUTIONS FOR TELECOURSES AND PRINT BASED COURSES

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April 1987

JC 870 433

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Introduction

John Tyler Community College founded the Extended Learning Institute (ELI) in 1982 as a program to develop and administer instruction via alternative delivery systems. The major alternative system has been, and continues to be, the use of print based, independent study courses.

These courses are essentially modified correspondence courses. Students do not attend class meetings, may take an extended period of time for completion, may register and complete courses anytime (open enrollment), and come to campus only to take tests. Vieving of video materials on-campus is also required for some print based courses.

Another alternative delivery system offered by ELI has been the broadcast of telecourses over a local cablevision channel and by a local Public Broadcasting Service (PBS) affiliate. Telecourses utilize a more structured approach in that video lessons are broadcast on a fixed schedule concurrent with regular on-campus courses. Visits to campus are limited to attending an initial orientation session, taking scheduled exams, and in some telecourses attending supplemental discussion sessions.

Print courses have been offered every quarter since the winter term of 1982. The present ELI program was established during the 1982 fall term with the hiring of a full-time director and creation of an office area.

Telecourses have been offered a total of five quarters plus the present term. They were offered from fall 1983 through winter 1985 with no telecourses offered during the 1984 summer term. The present term, spring 1987, is the first term for telecourse offerings since the 1985 winter term.

Purpose

This study reports a comparison of grade distributions for telecourses and print based courses. The results provide a basis for planning future ELI course development based upon relative delivery system effectiveness as measured by final student grades.

A cursory comparison of these two delivery systems to traditional classroom instruction is also reported. No attempt is made to closely examine this particular comparison since such an examination would address a question different from that intended in this study. The question addressed by the present study is "Relative to each other, which of the two alternative delivery systems, telecourses and print based courses, is more effective as measured by course final grade?"

Any in-depth study comparing either or both alternative delivery systems to traditional campus instruction addresses the question "How effective are alternative delivery systems compared to traditional classroom instruction as measured by final course grade?" This question is well addressed in other published research and provides little direction in the present situation.

Method

Data for the telecourses and print based courses were assembled from database files in the Extended Learning Institute. Data for all courses offered by the College during the same terms were furnished by the College's Office of Institutional Research. It should be noted that data for all College courses include final grades for telecourses and print based courses. Thus, College data are distorted because of this inclusion. Any distortion is slight since telecourses and print based enrollments accounted for only 4.2% of the total grades awarded during the terms under study. Final course grades were combined into the following four groups:

1.	Telecourse Students	N=321	(Table 1)
2.	Print Based Students	N=1460	(Table 2)
3.	Telecourse and Print Based Combined	N=1781	(Table 3)
4.	All College Courses	N=42,647	(Table 4)

Findings

Table 1 is a grade distribution for all students who enrolled in ELI telecourses during fall 1983, winter 1984, spring 1984, fall 1984 or winter 1985. The total number of students represented is 321 in 10 telecourses. Appendix A contains a list of telecourses with series titles by term. Students who enrolled but withdrew during the official add/drop period are not included.

Table 1
Grade Distribution For
ELI Telecourse Students

Course Length	A	B	C	D	F	W	I	Total Headcount
11 weeks	64	51	40	19	55	38	0	268
22 weeks	6	0	9	2	15	21	0	53
TOTAL -	70	51	49	21	70	59	0	321
% -	(21.8)	(15.8)	(15.2)	(6.5)	(21.8)	(18.3)	(0.0)	

An equal percentage of students (21.8%) made a final grade of A and F while a total of 37.5% made grades of B, C, or D. The remainder, 18.3% withdrew. The small number of 22-week telecourse students is due to the elimination of the policy allowing an extended time for telecourses. This practice was discontinued after two quarters due to the extremely high number of withdrawals and failures (36 of 53 or 67.9%). It was decided that an extended time provided little or no benefit for an overwhelming majority of students. Extensions continue to be granted on an individual basis when extenuating circumstances exist.

Table 2 lists final course grades for ELI students who enrolled in print based courses during the same terms as those studied for the telecourses. As with the telecourses, the total headcount of 1460 does not include those students who enrolled and withdrew before the end of the add/drop period.

Table 2
Grade Distribution
For
Print Based Students

Course Length	A	B	C	D	F	W	I	Total Headcount
11 weeks	81	55	34	10	121	93	0	395
22 weeks	178	118	64	22	325	358	0	1065
TOTAL -	259	173	98	32	446	451	0	1460
% -	(17.7)	(11.8)	(6.7)	(2.1)	(30.5)	(30.8)	(0.0)	

The majority of print based course students, 61.3%, either withdrew or failed. A significant percent, 29.5%, made either an A or B final grade. A small percentage, 8.8%, made a final grade of C or D.

It should be noted that the percentage of W or F grades has decreased significantly in recent quarters. In the early years of the ELI program, many students mistakenly registered for ELI print courses thinking that the courses would be easier. Since that time, students have "spread the word" that ELI courses are harder for most people because of the high levels of motivation and self-discipline required. The percentage of combined F and W grades is now about 50 percent for print based courses. Appendix B provides a list of print based courses offered during the terms studied.

The following table shows combined data for telecourses and print based courses. Relative percentages are recomputed to reflect new totals for each letter grade. The total number of students is 1781.

Table 3
Grade Distribution For
Telecourse and Print Based
Courses Combined

Course Length	A	B	C	D	F	W	I	Total Headcount
11 weeks	145	106	74	29	176	131	0	663
22 weeks	184	118	73	24	340	379	0	1118
TOTAL -	329	224	147	53	516	510	0	1781
% -	(18.4)	(12.5)	(8.2)	(2.9)	(28.9)	(28.6)	(0.0)	

Forty percent of the students made a passing final grade with 30.9% making an A or B. Sixty percent either failed or withdrew. Percentages shown in Table 3 do not total exactly 100% due to rounding. A large majority, 62.8% chose the 22 week period while 37.2% chose an 11 week term. As would be expected, overall distribution percentages increased positively when telecourse grades were combined with print based course grades.

The final table, Table 4, is an overall grade distribution for <u>all</u> courses offered by the College during the five quarters being studied. As noted earlier, telecourse and print based course grades are included in these data and thus some

distortion results. Telecourse and print based course grades account for only 4.2% of the total.

Table 4
Grade Distribution
For
All College Courses

	A	B	C	D	F*	W	Other**
N --	10,652	8436	6213	2446	3696	4672	6532
% ---	25.0	19.8	14.6	5.7	8.7	10.9	15.3

Total Grades -- 42,647

* Includes U grades.
** Includes I, R, S, X, and • grades.

All failing (F) and unsatisfactory (U) grades were combined under F since these both represent failure to satisfactorily complete course requirements. Exactly one-fourth of the students during the five terms studied received a grade of A while an additional 40.1% received either B, C, or D final grades. The category of Other contains a relatively small number of various passing grades as well as audit, incomplete, and missing grades. Almost 11% of the students withdrew after the add/drop period and only 8.7% received a failing grade. Other grades accounted for 15.3% of the total.

Discussion

The findings clearly show that telecourse students in general received better final grades than print based course students. Also, significantly fewer telecourse students withdrew or failed than print based course students - 40.1% versus 61.3%. Finally, the grade distribution for print based courses approximated a bimodal distribution with 29.5% clustered around the high end of the distribution (A or B grade) and 61.3% either failing or withdrawing. Only 8.8% received a C or D grades. This suggests that print based students generally did well or were not able to successfully complete the course.

In contrast, the grade distribution for telecourse students showed a more even distribution. The number of A and F grades was exactly the same while the percentages of B and C grades was not significantly different.

While all passing grade categories for telecourses were significantly higher than those for print based courses, the grade of C showed the most marked difference - 15.2% for telecourses versus 6.7% for print based courses.

In comparing telecourse and print based course grade distributions to the distribution for all College courses, one obvious finding emerges. The telecourse grade distribution more closely approximated the College distribution than did the print based course distribution. In fact, the percentages of telecourse students who received grades of C or D were higher than the College percentages - 15.2 % and 6.5% versus 14.6% and 5.7% respectively. A significantly higher percentage of telecourse students (40.1%) received a F or W grade than the College as a whole (19.6%).

Conclusions

Based upon the data presented, the following overall conclusions emerge:

1. Telecourses are a more effective alternative delivery system than print based courses as measured by final course grade. Students are more likely to succeed in telecourses.

2. Significant numbers of students benefit from both alternative delivery systems. Although further ELI course development should occur primarily in the area of telecourses, it should not be at the total exclusion of print based course development.

3. Marginal students, C or D grades, are more likely to succeed in telecourses than in print based courses. A significant part of the high number of failure and withdrawal grades can be attributed to the inability of marginal students to successfully complete courses with minimal structure, i.e. print based courses.

4. Although failure and withdrawal rates for both alternative delivery systems are consistent with similar rates found at other colleges, further efforts should be directed toward improving overall success rate. Preliminary studies at other colleges indicate that increased contact between students and faculty members increases the probability for student success. This is also true for traditional campus courses as well as print based courses.

APPENDIX A

ELI Telecourses by Term

Course	Fall 1983	Win. 1984	Spr. 1984	Fall 1984	Win. 1985	Total Students
BUAD 100	X	X	X	X	X	43
BUAD 116	-	X	X	X	X	35
BUAD 164	X	X	X	X	X	64
DAPR 106	X	X	X	X	X	103
ECON 211	-	-	-	X	-	14
ECON 212	-	-	-	-	X	8
HUMN 299	-	-	-	X	-	5
PSYC 299	-	-	-	X	-	11
SOCI 201	-	-	-	X	-	22
SOCI 202	-	-	-	-	16	16
					TOTAL -	321

Course Number	Series Title
BUAD 100	The Business File
BUAD 116	Personal Finance and Money Management
BUAD 164	The Business of Management
DAPR 106	Computers At Work (Fall '83 - Spring '84)
	The New Literacy (Fall '84 - Winter '85)
ECON 211, 212	The Money Puzzle
HUMN 299	Heritage: Civilization and the Jews
PSYC 299	Brain, Mind, and Behavior
SOCI 201, 202	Focus on Society

APPENDIX B

ELI Print Based Courses
Fall 1983 - Spring 1985

Course Number	Course Title
ACCT 114, 115	Applied Accounting I, II
ACCT 227	Managerial Accounting
BUAD 116 (1 term)	Personal Finance
BUAD 174, 175	Small Business Management I, II
ECON 147	Consumer Economics
ECON 211, 212, 213	Principles of Economics I, II, III
ENGL 101, 102	Communications Skills I, II
ENGL 111, 112, 113	English Composition I, II, III
ENGL 137	Technical Writing
ENGL 248	American Short Story
ENGL 271, 272, 273	Survey of World Literature I, II, III
MATH 161, 162, 163	College Mathematics I, II, III
PSYC 201, 202, 203	General Psychology I, II, III

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